

public resort, fitted up with moveable chairs and tables, whether for indoors or the open air, as is the fashion in such buildings on the continent; round tables, so that parties may group themselves without formality, two, or three, or more, at a table. In one building we noticed abroad, the slabs, or table-tops, were of marble, and being ponderous, it is an excellent material, and could be had cheap enough for such purposes here. At the farther end of the hall is a conservatory, separated from it by a glazed partition, but accessible from the hall under proper regulations, and at all times presenting an agreeable feature to the visitor. Rare plants and choice specimens of the floral world would occupy it, and beyond it would be a fine terraced garden, sloping to the south or south-west. On one side of the hall is the bar, from whence would be served out to waiters, from an open counter, all the refreshments; and on the opposite side a spacious coffee-room, looking out on to a terrace, and to be occupied by those who would read or spend a quiet hour apart from the passing to and fro in the hall. At each of the four angles of the building is a private parlour, or dining-room, for parties, or it might be, for ladies alone—or for children's parties. The hall is lighted by a sort of clerestory, rising above the roofs of the surrounding apartments, and those roofs are terraced for a public promenade, approached by capacious stairs from the large vestibule to the hall. Above the hall, again, is a still more elevated terrace, or verandah—a stage of ornamented iron-work, roofed in low, so as to have the character of an awning, and be a favourite place of resort and shade in hot weather. Behind the bar is a semicircular range of offices, and all around the building we would have it laid out, in the best taste of public walks and gardens, with appropriate fountains, terraces, steps, pavilions, and the like.

See what an influence such a place of resort as this would have upon public manners. We would have it economical, and principally, if not wholly, confined to the simple class of refreshments, such as tea and coffee and confectionary. We are not for setting up a government or a national tavern, nor a government anything; to come into unfair competition with private trading; but since it would be manifestly improper to permit the erection of *private public-houses* in the people's parks, so the only proper alternative appears to be that, under the guardianship of the public trustees, the really requisite and reasonable provision should be made of the kind we advocate.

We have heard much of the sufferings from the over-toil of late hours and confinement of poor and respectable females in the employment of our mantua-makers and milliners, and of the drudgery of shopmen in drapers' and other establishments. We fly to our authority again on this head, Mr. Curtis, who says—

"It cannot be denied that a very large proportion of the diseases of the inhabitants of towns, including those of the ear, are produced by their long sedentary occupations; and unless some abridgement can be effected in the hours of business, so as to leave time for healthful recreation, the opening of parks and squares will be attended with but little advantage to the adult population. It is custom and prejudice only which prevent some change of this sort; for, by beginning business an hour or two earlier, quite as much work would be got through as at present, even though all places of business should be closed at six o'clock in the evening. When in Dublin I was informed that all the banks leave off at three in the afternoon, and no complaint is made of this arrangement; nor is it easy to see how any harm can result from it."

Confident, therefore, in the accomplishment of our object, we have taken this decisive step as a beginning of progress, and we shall be happy if what we have done invite the attention of able heads to the design and suggestion of these or similar structures. Again we urge the union of the *dulce cum utile*, as the perfection of the arts and workings of civilization, and we will conclude as we have been prompted to refer all along to our precursor friend in the path we are treading.

"It has been said, 'See Paris, and die.' As if the sight of that city were the supremest enjoyment in which man could participate; but I would much rather," says Mr. Curtis, "have it said, 'See London and live!' and live happily and joyously too. Napoleon called us a nation of shop-keepers, meaning to reproach us with a sordid devotion to mere commerce, and with incapacity for compre-

hending the loftier pleasures derivable from the triumphs of art; but I doubt not yet to see the time when this reproach shall be utterly inapplicable to England; already we have made great progress in a better state of things, and no limit can be set to our progression. A dramatic writer has called London the *fons delectabilis*, but I should like to see it deserve the appellation of *fons salutaris* also; and it is gratifying to know that every change which adds to its external attractions contributes to its healthiness at the same time.

## ON VARNISHING AND THE PREPARATION OF DIFFERENT VARNISHES.

(Continued from page 324.)

**To prepare the Rotten-stone.**—We rarely obtain rotten-stone free from grit and harsh particles. The best, but certainly not the most agreeable way of ascertaining its quality, is to take a little between the teeth, when the least portion of grit is instantly detected. An equally certain and far more cleanly method is that invariably adopted by careful workmen, who always wash it previously to use. This is done by stirring the fine powder in a large quantity of water, then allowing it to remain at rest for a few seconds, and pouring the water into a vessel of glazed earthenware; the powder which then precipitates will be perfectly fine and smooth; by washing the remaining portion, the whole of the finer parts may be separated from the grit.

The gloss upon shell-lac varnish which has been polished is less brilliant than that of the unpolished varnish; but this gloss may be imparted by a single coat of seed-lac varnish, which will not materially affect the perfect surface produced by polishing.

**Black Shell-lac Varnish.**—We may easily render this varnish black, by the admixture of either ivory or lamp-black. We are assured by a gentleman who has devoted much attention to the subject, that the latter is to be preferred; but it should not be used as obtained from the shops, being then greasy, as the workmen term it, and will neither mix nor dry well. Not unfrequently, the lamp-black contains particles of plaster, from the walls of the chamber in which it is prepared; this, of course, must be rejected.

**To prepare Lamp-black for Use.**—Press a portion of it into an earthenware or metallic vessel, which is to be made red-hot in a clear fire. It is not absolutely necessary to close the vessel, but the powder should be well rammed in, and a regular heat sustained until the contents are red-hot throughout; this may be known by the lamp-black ceasing to flame at the exposed parts. Now remove it from the fire, and allow it to become quite cold before taking it out of the vessel, otherwise it will burn into ashes. Lamp-black thus prepared will mix readily with water, and will dry well in paint or varnish, added to which, its colour is improved.

**To mix the Colour with the Varnish.**—Rub the lamp-black up with a little alcohol, spirit of turpentine, or weak varnish, taking care to make it perfectly smooth before adding it to the varnish. To ensure a good black colour, the quantity of lamp-black must be considerable; this, doubtless, will lessen the brilliancy of the varnish in some degree, but a thin coat of seed-lac tends to diminish the fault. When a small quantity only of black varnish is wanted, it may be conveniently made by the solution of black sealing-wax in alcohol; the sealing-wax being composed principally of shell-lac. This preparation must be made with very little heat, or the black colour will be precipitated.

**Shell-lac Varnish for various Colours.**—This may be easily made by mixing strong body colours in fine powder, with the varnish, observing to levigate them in the manner already recommended. None but full deep colours will answer the purpose, as the colour of the varnish will deteriorate all those which possess any transparency, or are of a light shade.

**White or Light-coloured Spirit Varnishes.**—We have observed, that although varnishes made from lac are, in many respects, preferable to those made from the more colourless resins, yet they cannot be applied where a tinge of brown would be inadmissible. In this case the varnish must obviously be devoid of colour, or nearly so. The resins principally employed are mastic, sandarac, elemi, and anini; but the two latter are rarely used. Neither mastic nor sandarac alone constitutes a good varnish; the former is deficient in hardness and solidity, and the latter has too little gloss; they are, therefore, best employed in combination, and the following proportions are strongly recommended:—Mastic and sandarac, in the ratio of 1 to 3 (by weight); alcohol, 10½ (by measure)—that is, assuming the joint weight of the resins to be four ounces, the proper quantity of alcohol would be 10½ ounces.

Tingrey recommends, in making varnishes of this description, to pulverize the resins, and add about

one-third of their weight of pounded glass when they are mixed with the alcohol; this prevents the particles of resin from agglutinating, and likewise from adhering to the bottom of the vessel, which is apt to take place if the ingredients are not shaken or stirred very frequently. A moderate degree of heat must be employed, but this should be carefully regulated, and in the summer season is unnecessary, as the warmth of the atmosphere is generally sufficient.

**Copal.**—This valuable and singular description of resin is imported from South America and the East Indies: it is a natural exudation from a large tree, which hardens in the air. The best copal is a hard brittle resin, in rounded lumps of moderate size, easily reducible to fine powder, beautifully transparent, but often like amber, containing parts of insects and other small extraneous bodies impacted in its substance.

The colour of copal is a light lemon yellow, varying to orange, but, when dissolved and thinly spread over any surface, the colour is scarcely perceptible, and it only gives a fine, hard, smooth, transparent gloss. It is this union of hardness and transparency, with a want of colour, that renders copal peculiarly valuable as a varnish.

Copal is the most intractable of the class of resins, and differs from most of these substances in the great difficulty with which its solution is effected in alcohol and the essential oils, so as to require great purity of these *menstrua* and particular management. Alcohol, which so readily dissolves the other resins, has but little action on copal; for if this resin, in fine powder, be digested with the very purest alcohol, with or without heat, scarcely any of it is dissolved, and the copal coalesces at the bottom of the vessel into a tough cohesive mass. A solution may be effected by the addition of camphor, which acts powerfully upon all resins, but upon none are its effects more striking than upon copal. When the two are separately powdered and mixed, the copal absorbs the camphor, swells and softens into a pasty mass, which will remain for months of the same consistence, without hardening. To make an alcoholic solution of copal, dissolve half-an-ounce of camphor in one pint of highly rectified alcohol; put it into a glass vessel over a lamp, and add four ounces of copal in small pieces; continue the heat just to that degree at which the bubbles may be counted, till the solution is complete. A portion of the copal will separate when cold, but the greater part of it remains in permanent solution. It is necessary, however, first to dissolve the camphor in the alcohol; for, if the pasty mass arising from the mixture of copal and camphor be added to alcohol, the solution will not succeed.

Copal may be dissolved in spirit of turpentine, by the aid of an essential oil, of which the oil of spike and lavender are considered the best, although we do not find any material difference. The process is as follows:—Take 2 oz. of oil of lavender, heat it in a glass matrass, add thereto 1 oz. of copal, in coarse powder, and, at different times, stirring the mixture with a stick of white wood. When the copal is dissolved, add 6 oz. of spirit of turpentine, nearly boiling, and incorporate the whole thoroughly. This gives a fine gold-coloured varnish.

Camphor also assists the solution of copal in spirit of turpentine, as it does in alcohol, and the same precaution must be observed to dissolve the camphor completely in the spirit of turpentine before the copal is added. As a general rule, it is found that ½ ounce of camphor is sufficient to 1 quart of spirit, to enable it to take up as much copal as will constitute a good varnish.

The best solvent of copal is *caoutchoucene*, combined with alcohol, as it acts rapidly on the resin, and without heat; nor are we aware that any particular care or attention is necessary. To unite copal or any of the resins with a fixed oil, it must first be rendered drying by exposure to the sun and air, on water placed in shallow leaden vessels, for at least three weeks, until it is bleached and becomes white. It is absolutely essential, however, in making oil-varnishes, to expose the materials to a high degree of heat, not less than is sufficient to liquify the resin. This invariably gives a brown colour to the resin, which, as we have already observed, is frequently detrimental. Copal, when melted with as little heat as possible, and then dropped into drying oil, dissolves with ease, and this solution, mixed with spirit of turpentine, forms a very fine hard varnish. To avoid, as much as possible, the discolouration of the copal, Tingrey recommends it to be enclosed in a kind of wire cage, suspended in a very slow and well-regulated furnace; and, so soon as any portion melts, it falls in drops into the drying-oil, heated and set beneath it.

We are indebted to the late Mr. Hand, an eminent painter on glass, for the following process:—Copal or amber being put into a suitable vessel or matrass, of very thin glass the same must be held by its neck, in wooden tongs, over a clear fire—being careful, however, not to overheat or discolour the copal or